

REMARKS

In the Office Action, claims 1-10 and 23-40 remain withdrawn. Claims 11-22 were rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent 4,564,945 to Glover, et al. (Glover) in view of the United States Patent 5,392,299 to Rhines, et al. (Rhines).

In this Amendment, Applicants amend claim 11, but have not added or amended any other claim. Accordingly, claims 1-40 will remain pending in the application upon entry of this Amendment.

Rejection of Claims 11-22 under §103(a)

Claims 11-22 were rejected under §103(a) as being unpatentable over Glover in view of Rhines. Claims 12-22 are dependent on claim 11. Claim 11 recites a method that encodes a block of data. The block of data has n-dimensions and is received from an input source. The block contains several information bits. The method receives a row of the block and immediately outputs the row. The method encodes the information bits in the row. A first set of encoded data is generated according to a first encoding scheme. The method outputs the first set of encoded data. The method encodes the information bits in a column according to a second encoding scheme. A second set of encoded data is generated and iteratively updated according to the information bits in the row. The method hyper-diagonally encodes the information bits in the block according to a parity encoding scheme. A hyper set of encoded data is generated according to: the information bits in the row, the information bits in the column, the first set of encoded data, and the second set of encoded data. At least one information bit in the row is located in a different row for the hyper set of encoded data than in the block. The method outputs the second set of encoded data after all the information bits and all subsequent first sets of encoded data are outputted. The method outputs the hyper set of encoded data.

Applicants respectfully submit that Glover, Rhines, and their combination do not disclose, teach, or even suggest such a method. For instance, Glover reflects the state of DVD recording circa 1986. Hence, the cited portions of Glover describe adding two rows and two columns of Reed/Solomon redundancy bytes to a raw data block, for error correction as was known in the art in 1986. Glover does not disclose, teach, or even suggest several limitations recited in claim 11, such as the multiple various encoding

steps recited therein, in addition to the limitations regarding hyperdiagonal encoding, as stated by the Examiner.

As with Glover, Applicants recognize and understand the Examiner's citation of Rhines. However, the cited portion of Rhines describes orthogonal interleaving and does not disclose, teach, or even suggest hyperdiagonal encoding. Applicants respectfully direct the Examiner's attention to column 9, line 54, through column 10, line 51, of Rhines. Here, Rhines describes orthogonal interleaving in such detail as to distinguish it from hyperdiagonal encoding, and to the point that Rhines actually teaches away from the limitations recited in claim 11. More specifically, at column 10, line 9, Rhines states "Orthogonal interleaving of the rows in the data planes is accomplished by the interleaver 16 by a row shuffle interleave process that shuffles rows between data planes (interplane shuffle) rather than shuffling inside a single data plane (intraplane shuffle)."

Moreover, at column 10, line 31, Rhines further states "In the preferred embodiment of the invention, the interplane orthogonal shuffling algorithm maintains the same row position for each shuffled row after transfer to the new plurality of data planes." Thus, Rhines' shuffling and/or interleaving is not equivalent to the hyperdiagonal encoding recited within claim 11, and further, Rhines expressly teaches against the limitations, the hyperdiagonal encoding, and the other steps of claim 11.

Nonetheless, to further emphasize the several differences from Rhines, and from Glover also, Applicants amend claim 11 to recite that at least one information bit in the row is located in a different row for the hyper set of encoded data than in the block. In contrast, Glover and Rhines both explicitly maintain row positioning.

Accordingly, Applicants respectfully submit that Glover, Rhines, and the combination of Glover and Rhines do not invalidate or otherwise render unpatentable claim 11. Since claims 12-22 are dependent on claim 11, Applicants respectfully submit that the cited references do not invalidate claims 12-22 for at least the reasons discussed above in relation to claim 11. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §103(a) rejection of claims 11-22.

CONCLUSION

Applicants respectfully submit that all pending claims, namely claims 11-22, are in condition for allowance. Reconsideration of the rejection is requested. Examination and allowance are earnestly solicited at the earliest possible date. Should the Examiner have any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
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Dated: 12-1-06

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CERTIFICATE OF MAILING (37 CFR § 1.8(a))

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